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## RAW SEQUENCE LISTING

DATE: 01/29/2003

PATENT APPLICATION: US/10/069,290A

TIME: 14:56:27

Input Set : A:\35029-20013.00.txt

Output Set: N:\CRF4\01292003\J069290A.raw

4 <110> APPLICANT: Kosaka, Masaaki  
 5 Ozaki, Shuji  
 6 Wakahara, Yuji  
 8 <120> TITLE OF INVENTION: EXPRESSION ENHANCER FOR HM1.24 ANTIGEN  
 11 <130> FILE REFERENCE: 350292001300  
 13 <140> CURRENT APPLICATION NUMBER: US 10/069,290A  
 C--> 14 <141> CURRENT FILING DATE: 2003-01-29  
 16 <150> PRIOR APPLICATION NUMBER: PCT/JP00/05617  
 17 <151> PRIOR FILING DATE: 2000-08-22  
 19 <150> PRIOR APPLICATION NUMBER: JP 2000-38689  
 20 <151> PRIOR FILING DATE: 2000-02-16  
 22 <150> PRIOR APPLICATION NUMBER: JP 11/236007  
 23 <151> PRIOR FILING DATE: 1999-08-23  
 25 <160> NUMBER OF SEQ ID NOS: 26  
 27 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 29 <210> SEQ ID NO: 1  
 30 <211> LENGTH: 1013  
 31 <212> TYPE: DNA  
 32 <213> ORGANISM: Homo sapiens  
 34 <220> FEATURE:  
 35 <221> NAME/KEY: CDS  
 36 <222> LOCATION: (23)...(540)  
 38 <400> SEQUENCE: 1  
 39 gaattcggca cgagggatct gg atg gca tct act tcg tat gac tat tgc aga 52  
 40 Met Ala Ser Thr Ser Tyr Asp Tyr Cys Arg  
 41 1 5 10  
 43 gtg ccc atg gaa gac ggg gat aag cgc tgt aag ctt ctg ctg ggg ata 100  
 44 Val Pro Met Glu Asp Gly Asp Lys Arg Cys Lys Leu Leu Leu Gly Ile  
 45 15 20 25  
 47 gga att ctg gtg ctc ctg atc atc gtg att ctg ggg gtg ccc ttg att 148  
 48 Gly Ile Leu Val Leu Leu Ile Ile Val Ile Leu Gly Val Pro Leu Ile  
 49 30 35 40  
 51 atc ttc acc atc aag gcc aac agc gag gcc tgc cgg gac ggc ctt cgg 196  
 52 Ile Phe Thr Ile Lys Ala Asn Ser Glu Ala Cys Arg Asp Gly Leu Arg  
 53 45 50 55  
 55 gca gtg atg gag tgt cgc aat gtc acc cat ctc ctg caa caa gag ctg 244  
 56 Ala Val Met Glu Cys Arg Asn Val Thr His Leu Leu Gln Gln Glu Leu  
 57 60 65 70  
 59 acc gag gcc cag aag ggc ttt cag gat gtg gag gcc cag gcc gcc acc 292  
 60 Thr Glu Ala Gln Lys Gly Phe Gln Asp Val Glu Ala Gln Ala Ala Thr  
 61 75 80 85 90  
 63 tgc aac cac act gtg atg gcc cta atg gct tcc ctg gat gca gag aag 340  
 64 Cys Asn His Thr Val Met Ala Leu Met Ala Ser Leu Asp Ala Glu Lys

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65          95          100          105
67 gcc caa gga caa aag aaa gtg gag gag ctt gag gga gag atc act aca 388
68 Ala Gln Gly Gln Lys Lys Val Glu Glu Leu Glu Gly Glu Ile Thr Thr
69          110          115          120
71 tta aac cat aag ctt cag gac gcg tct gca gag gtg gag cga ctg aga 436
72 Leu Asn His Lys Leu Gln Asp Ala Ser Ala Glu Val Glu Arg Leu Arg
73          125          130          135
75 aga gaa aac cag gtc tta agc gtg aga atc gcg gac aag aag tac tac 484
76 Arg Glu Asn Gln Val Leu Ser Val Arg Ile Ala Asp Lys Lys Tyr Tyr
77          140          145          150
79 ccc agc tcc cag gac tcc agc tcc gct gcg gcg ccc cag ctg ctg att 532
80 Pro Ser Ser Gln Asp Ser Ser Ser Ala Ala Ala Pro Gln Leu Leu Ile
81 155          160          165          170
83 gtg ctg ct gggcctcagc gctctgctgc agtgagatcc caggaagctg gcacatcttg 590
84 Val Leu
87 gaaggtccgt cctgctcggc ttttcgcttg aacattccct tgatctcatc agttctgagc 650
88 gggcatcagg gcaacacggt tagcggggag agcacggggt agccggagaa gggcctctgg 710
89 agcaggtctg gaggggccat ggggcagtc tgggtctggg gacacagtcg ggttgaccca 770
90 gggctgtctc cctccagagc ctccctccgg acaatgagtc cccctctctg tctccacccc 830
91 tgagattggg catgggggtgc ggtgtggggg gcatgtgctg cctgttggtta tgggtttttt 890
92 ttgcgggggg gggtgctttt ttctggggtc tttgagctcc aaaaaataa acacttcctt 950
93 tgagggagag cacaccttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaat tcggggcgcc 1010
94 gcc 1013
96 <210> SEQ ID NO: 2
97 <211> LENGTH: 172
98 <212> TYPE: PRT
99 <213> ORGANISM: Homo sapiens
101 <220> FEATURE:
102 <221> NAME/KEY: SIGNAL
103 <222> LOCATION: (1)...(1)
105 <400> SEQUENCE: 2
106 Met Ala Ser Thr Ser Tyr Asp Tyr Cys Arg Val Pro Met Glu Asp Gly
107 1 5 10 15
108 Asp Lys Arg Cys Lys Leu Leu Leu Gly Ile Gly Ile Leu Val Leu Leu
109 20 25 30
110 Ile Ile Val Ile Leu Gly Val Pro Leu Ile Ile Phe Thr Ile Lys Ala
111 35 40 45
112 Asn Ser Glu Ala Cys Arg Asp Gly Leu Arg Ala Val Met Glu Cys Arg
113 50 55 60
114 Asn Val Thr His Leu Leu Gln Glu Leu Thr Glu Ala Gln Lys Gly
115 65 70 75
116 Phe Gln Asp Val Glu Ala Gln Ala Ala Thr Cys Asn His Thr Val Met
117 80 85 90 95
118 Ala Leu Met Ala Ser Leu Asp Ala Glu Lys Ala Gln Gly Gln Lys Lys
119 100 105 110
120 Val Glu Glu Leu Glu Gly Glu Ile Thr Thr Leu Asn His Lys Leu Gln
121 115 120 125
122 Asp Ala Ser Ala Glu Val Glu Arg Leu Arg Arg Glu Asn Gln Val Leu
123 130 135 140

```

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Input Set : A:\35029-20013.00.txt

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124 Ser Val Arg Ile Ala Asp Lys Lys Tyr Tyr Pro Ser Ser Gln Asp Ser  
 125 145 150 155  
 126 Ser Ser Ala Ala Ala Pro Gln Leu Leu Ile Val Leu  
 127 160 165 170  
 130 <210> SEQ ID NO: 3  
 131 <211> LENGTH: 2061  
 132 <212> TYPE: DNA  
 133 <213> ORGANISM: Homo sapiens  
 135 <220> FEATURE:  
 136 <221> NAME/KEY: misc\_feature  
 137 <222> LOCATION: (1)...(2061)  
 138 <223> OTHER INFORMATION: Nucleotide sequence of promoter region of gene  
 139 encoding for Hm1.24 protein antigen.  
 141 <221> NAME/KEY: CDS  
 142 <222> LOCATION: (2041)...(2061)

W--&gt; 144 &lt;400&gt; 3

145 actaaaagtc tctgatatgc agaaataatg gcataadgctg tctttctgtc tgtcccctct 60  
 146 ctctctctct gcctcggctg ccaggcaggg aagggccccc tgtccagtgg acacgtgacc 120  
 147 cacatgacct tacctatcat tggagatgac tcacactctt taccctgccc cttttgcttt 180  
 148 gtatccaata aataacagca cagccagaca ttccggggcca ctaccagtct ccgcgcattg 240  
 149 ctggtagtgg tccccgggc ccagctgtct tttcttttat ctcttcgtct tgtgtcttta 300  
 150 tttctacact ctctcgtcgc cgcacacagg gagagaccca ctgaccctgt ggggctggtc 360  
 151 cctacagtaa ttttaaaggg aagagcaaca aactttcggg ttgcagggtt gggactgttt 420  
 152 acagctgcaa aatttagaga ggacatcaat ctattattat ccacatttta cagctgggga 480  
 153 aatcaatgct aagagaggaa attcatttgc ccagaggtgc accaccctgg cctccaatgt 540  
 154 gcaattcatg caattgtgat ttccgacctg gtcccaaaact aaccctaaag ttagcaggcc 600  
 155 agaacagtgc tgctcaaata agtcagctta gtcaaataag tcaggcaaag gtcgtgtctt 660  
 156 tgcacctgga gtcctggcca ggctggtagg tccctcctcc tgggacaagt tcaccctcag 720  
 157 aattttcagc aagatcatct cccacagctt gttaattggg tcttggttct aagtgtttt 780  
 158 tttgtttatt ggtttaagag atgggatccc actctatcac ccaggcttga gtgccgtggc 840  
 159 acaatcatag ctgctgcag cctcaaaact ctgggctcga gtgacctcc tgcctcagcc 900  
 160 tcccagcctc agcctgggac cacaggcatg taccaccatg cctggctcta agtggcttta 960  
 161 atggggctct tctgagggat gttggagtca gggcctgggg ggagttcccc aggccttctg 1020  
 162 ggaggcctgg gctctggact tgacctcgcc tactgtctgg ccctgctgaa aagaaaaaaa 1080  
 163 aacatggaaa tggcagacct aacagaatct gggctgtggt caggatgtgg ctgaagaagc 1140  
 164 cacaagaaaa acatgcagtc ccctttcagc ggtcatgccc agcagttggg tgccgataat 1200  
 165 gggcctgatt tcctgttaga agccctggct ctcttgcca catggacagt gtctgaggct 1260  
 166 ggccctgtta tcccccttg cagatgaaga aacaggctca gagagtttac ctggtatcct 1320  
 167 ggagtcccag gagcactttt tctggaagta ggagcttggt tctgcagggt gccaagacag 1380  
 168 agaccgacat tgtttgttgg ctgggtcggt ctcccagttt tcagctggct ccagtctcac 1440  
 169 ctgttgctca cacaccctcc atgtctcca tagtcccctc ggtggggaca gaggcactgg 1500  
 170 atgaagccct gctcgtcacc acagagacac ctgaacacaa aaaccagtcc ctggggtcag 1560  
 171 acccaggccc cgccccaga cccaggccct gccctcactc caccacgcaa ctgtgcaacc 1620  
 172 tcagtttccc caggtggaga ccggaccaac aatgatggcc tctgcctctt caggtcatag 1680  
 173 tacagatgaa tacaggctgg caggccctag gcactcagta acacacggca gaggcacagg 1740  
 174 gacttaagat ggagtgtccc aggcagccac agttggctgg caccagttg ggaagggcc 1800  
 175 aagggtttt aaagcagggt gaaaaaaaaa gccacctcc tttctgggaa actgaaactg 1860  
 176 aaaacctaataaatcctctg cctgtaggtg cctcatgcaa gagctgctgg tcagagcact 1920  
 177 tcctggaact tgctattggg caggacgttt cctatgctaa taaagggtg gcccgtagaa 1980

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Input Set : A:\35029-20013.00.txt

Output Set: N:\CRF4\01292003\J069290A.raw

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178 gattccagca ccctccccta actccaggcc agactccttt cagctaaagg ggagatctgg 2040
179 atg gca tct act tcg tat gac 2061
180 Met Ala Ser Thr Ser Tyr Asp
181 1 5
184 <210> SEQ ID NO: 4
185 <211> LENGTH: 7
186 <212> TYPE: PRT
187 <213> ORGANISM: Homo sapiens
189 <400> SEQUENCE: 4
190 Met Ala Ser Thr Ser Tyr Asp
191 1 5
194 <210> SEQ ID NO: 5
195 <211> LENGTH: 29
196 <212> TYPE: DNA
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Primer HM2K
202 <400> SEQUENCE: 5
203 aaaggtacca gctgtctttc tgtctgtcc 29
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 28
207 <212> TYPE: DNA
208 <213> ORGANISM: Artificial Sequence
210 <220> FEATURE:
211 <223> OTHER INFORMATION: Primer BST2B
213 <400> SEQUENCE: 6
214 atagtcatac gaagtagatg ccatccag 28
216 <210> SEQ ID NO: 7
217 <211> LENGTH: 2144
218 <212> TYPE: DNA
219 <213> ORGANISM: Homo sapiens
221 <220> FEATURE:
222 <221> NAME/KEY: misc_feature
223 <222> LOCATION: (1)...(2144)
224 <223> OTHER INFORMATION: Nucleotide sequence coding for IRF-2 protein
226 <400> SEQUENCE: 7
227 aactgacggg ctttcatttc catttcacac accctagcaa cacttatacc ttgcggaatt 60
228 gtattggtag cgtgaaaaaa gcacactgag agggcaccat gccggtggaa aggatgcgca 120
229 tgcgcccgtg gctggaggag cagataaact ccaacacgat cccggggctc aagtggctta 180
230 acaaggaaaa gaagattttt cagatcccct ggatgcatgc ggctagacat ggggtgggatg 240
231 tggaaaaaga tgcaccactc tttagaaacc gggcaatcca tacaggaaag catcaaccag 300
232 gagtagataa acctgatccc aaaacatgga aggcgaattt cagatgcgcc atgaattcct 360
233 tgcctgatat tgaagaagtc aaggataaaa gcataaagaa aggaaataat gccttcaggg 420
234 tctaccgaat gctgccccta tcagaacggc cttctaagaa aggaaagaaa ccaaagacag 480
235 aaaaagaaga caaagttaag cacatcaagc aagaaccagt tgagtcatct ctggggctta 540
236 gtaatggagt aagtgatctt tctcctgagt atgcggtcct gacttcaact ataaaaaatg 600
237 aagtggatag tacgggtgaac atcatagttg taggacagtc ccatctggac agcaacattg 660
238 agaatcaaga gattgtcacc aatccgccag acatttgcca agttgtagag gtgaccactg 720
239 agagcgacga gcagccggtc agcatgagcg agctctaccc tctgcagatc tccccctgtg 780

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Input Set : A:\35029-20013.00.txt

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```

240 cttcctatgc agaaagcgaa acgactgata gtgtgccag cgatgaagag agtgccgagg 840
241 ggcgccgaca ctggcggaag aggaatattg aaggcaaaca gtacctcagc aacatgggga 900
242 ctcgaggctc ctacctgctg cccggcatgg cgtccttctg cacttccaac aaaccggacc 960
243 tccaggtcac catcaaagag gagagcaatc cgggtgcctta caacagctcc tggccccctt 1020
244 ttcaagacct ccccccttct tcttccatga cccagcagtc cagcagcagt cggccagacc 1080
245 gggagacccg ggccagcgtc atcaagaaaa catcgatat caccagggcc cgcgtcaaga 1140
246 gctgttaagc ctctgactct ccgcgggtgt tgttggggct tcttggcttt gttttgttgt 1200
247 ttgtttgtat tttttttttt tctctctgac acctatttta gacaaatcta agggaaaaag 1260
248 ccttgacaat agaacattga ttgctgtgtc caactccagt acctggagct tctctttaac 1320
249 tcaggactcc agcccattgg tagactgtgt tttctagagc ctgctggatc tcccagggtc 1380
250 actcactcaa gttcaaggac caacaagggc agtgagggtg ctgcattgcc tgcgggtcaag 1440
251 gccagcaagg tggagtggat gcctcagaac ggacgagata atgtgaacta gctggaattt 1500
252 tttattcttg tgaatatgta cataggcagc actagcgaca ttgcagtctg cttctgcacc 1560
253 ttatcttaaa gcacttacag ataggccttc ttgtgatctt gctctatctc acagcacact 1620
254 cagcaccccc ttctctgccc attccccagc ctctcttctc atcccatccc atcccatccc 1680
255 atcccatccc atcccatccc gctcttttcc tacttttctc tccctcaaag cttccattcc 1740
256 acatccggag gagaagaagg aaatgaattt ctctacagat gtcccatttt cagactgctt 1800
257 taaaaaaaaat ccttctaata tgctatgctt gaatgccacg cggtaaaaag gaaaaagtat 1860
258 catggaaata ttatgcaaat tcccagattt gaagacaaaa atactctaata tctaaccaga 1920
259 gcaagctttt ttatttttta tacaggggaa tttttattc aaggtaaaat tctaaataaa 1980
260 atataattgt tttttatctt ttctacagca aatttataat tttaagattc cttttcttgt 2040
261 ttatcagcag ttgttattac atccttgttg cacatttttt tttaattttg taaaggtgaa 2100
262 aaaagctttt atgagctcat ctagcaatca gattttcctg tgga 2144

```

264 &lt;210&gt; SEQ ID NO: 8

265 &lt;211&gt; LENGTH: 349

266 &lt;212&gt; TYPE: PRT

267 &lt;213&gt; ORGANISM: Homo sapiens

269 &lt;220&gt; FEATURE:

270 &lt;221&gt; NAME/KEY: UNSURE

271 &lt;222&gt; LOCATION: (0)...(0)

272 &lt;223&gt; OTHER INFORMATION: Amino acid sequence of IRF-2 protein

274 &lt;400&gt; SEQUENCE: 8

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275 Met Pro Val Glu Arg Met Arg Met Arg Pro Trp Leu Glu Glu Gln Ile
276 1 5 10 15
277 Asn Ser Asn Thr Ile Pro Gly Leu Lys Trp Leu Asn Lys Glu Lys Lys
278 20 25 30
279 Ile Phe Gln Ile Pro Trp Met His Ala Ala Arg His Gly Trp Asp Val
280 35 40 45
281 Glu Lys Asp Ala Pro Leu Phe Arg Asn Arg Ala Ile His Thr Gly Lys
282 50 55 60
283 His Gln Pro Gly Val Asp Lys Pro Asp Pro Lys Thr Trp Lys Ala Asn
284 65 70 75 80
285 Phe Arg Cys Ala Met Asn Ser Leu Pro Asp Ile Glu Glu Val Lys Asp
286 85 90 95
287 Lys Ser Ile Lys Lys Gly Asn Asn Ala Phe Arg Val Tyr Arg Met Leu
288 100 105 110
289 Pro Leu Ser Glu Arg Pro Ser Lys Lys Gly Lys Lys Pro Lys Thr Glu
290 115 120 125
291 Lys Glu Asp Lys Val Lys His Ile Lys Gln Glu Pro Val Glu Ser Ser

```

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/069,290A

DATE: 01/29/2003  
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Input Set : A:\35029-20013.00.txt  
Output Set: N:\CRF4\01292003\J069290A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; N Pos. 3,5,6,7  
Seq#:10; N Pos. 1,6,7

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**VERIFICATION SUMMARY**

DATE: 01/29/2003

PATENT APPLICATION: US/10/069,290A

TIME: 14:56:28

Input Set : A:\35029-20013.00.txt

Output Set: N:\CRF4\01292003\J069290A.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:144 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3  
L:329 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:333 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9  
L:334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:345 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:349 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10  
L:350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0

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